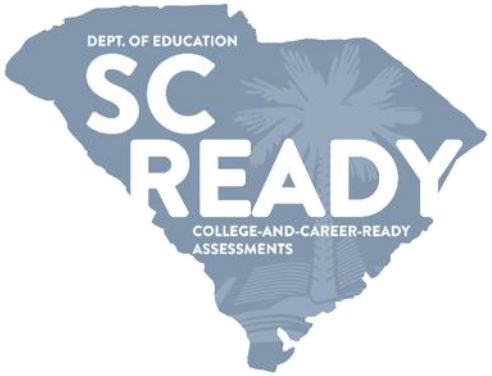

Mathematics
Grade 8
Performance Level Descriptors

Summer 2026

Columbia, SC

Performance Levels and Performance Level Descriptors

For the South Carolina College- and Career-Ready Assessments (SC READY), educators have developed four performance levels to describe student mastery and command of the knowledge and skills outlined in the 2025 South Carolina College- and Career-Ready Standards (SC CCR). Most students have at least some knowledge of the information described in the content standards; however, performance levels succinctly describe the extent to which students have demonstrated mastery of the knowledge and skills expressed in the college- and career-ready standards. Performance levels give meaning and context to scale scores by describing the knowledge and skills students must demonstrate to achieve each level.

The four performance levels on SC READY are Does Not Meet Expectations, Approaches Expectations, Meets Expectations, and Exceeds Expectations.

The general meaning of each of the four levels is provided below:

- The student **does not meet** the expectations of the grade-level content standards.
- The student **approaches** expectations of the grade-level content standards.
- The student **meets** the expectations of the grade-level content standards.
- The student **exceeds** the expectations of the grade-level content standards.

More-detailed descriptions of the specific concepts and skills are provided for each indicator in the **Performance Level Descriptors (PLDs)**. PLDs are descriptions of the knowledge and skills expected at each of the four performance levels and were developed by committees of South Carolina educators in 2024. The PLDs are based on the approved 2025 state-adopted mathematics content standards.

PLDs show a progression of knowledge and skills that students are expected to have mastered across the performance levels. It is important to understand that a student should demonstrate mastery of the knowledge and skills within the student's performance level as well as all content and skills in any performance levels that precede the student's own, if any. For example, a student who Meets Expectations should also possess the knowledge and skills described at the Approaches Expectations and Does Not Meet Expectations performance levels.

Standard Expectations: Policies and Ranges

	Does Not Meet Expectations	Approaches Expectations	Meets Expectations	Exceeds Expectations
Policy	The student **Does Not Meet Expectations** as defined by the grade-level content standards.	The student **Approaches Expectations** as defined by the grade-level content standards.	The student **Meets Expectations** as defined by the grade-level content standards.	The student **Exceeds Expectations** as defined by the grade-level content standards.
Range	The student ***needs substantial academic support*** to be on track for college and career readiness.	The student ***needs additional academic support*** to be on track for college and career readiness.	The student ***is prepared*** to be on track for college and career readiness.	The student ***is well prepared*** to be on track for college and career readiness.

Data, Probability, and Statistical Reasoning (DPSR)

8.DPSR.1

Analyze data sets to identify their statistical elements.

Indicator	Does Not Meet Expectations	Approaches Expectations	Meets Expectations	Exceeds Expectations
8.DPSR.1.1: Create and analyze scatterplots to represent numerical data sets in mathematical and real-world situations.	Recognize that a scatter plot can be used to represent a set of numerical data in mathematical and real-world situations.	Identify the scatter plot that represents a set of numerical data in mathematical and real-world situations.	Create and analyze scatter plots to represent numerical data sets in mathematical and real-world situations.	Explain how a scatter plot can be used to analyze real-world situations.
8.DPSR.1.2: Draw inferences about two populations utilizing representative random samples of comparisons of the shape of the distribution, measures of center, and measures of variability. Limit measures to *mean, median, mode, range, mean absolute deviation,* and *interquartile range*.	Describe the two data sets as shown including noting the shape and appropriate measure of center and spread to best describe the data.	Compare measures of center and measures of variability about data sets from two populations. Limit measures to *mean, median, mode, range, mean absolute deviation*, and *interquartile range.*	Draw inferences about data sets from two populations using the shape of the distribution, measures of center, and measures of variability. Limit measures to *mean, median, mode, range, mean absolute deviation*, and *interquartile range*.	Explain inferences made about data sets from two populations using the shape of the distribution, measures of center, and measures of variability. Limit measures to *mean, median, mode, range, mean absolute deviation*, and *interquartile range*.
8.DPSR.1.3: Describe how adding and deleting data throughout the data set can affect the mean, median, mode, and distribution of the data set.	Recognize the mean, median, mode, and distribution of the data set can be affected by adding and deleting data.	Describe how deleting or adding data throughout the data set can affect the mean, median, mode, and distribution of the data set.	Describe how adding and deleting data throughout the data set can affect the mean, median, mode, and distribution of the data set.	Accurately predict how adding and deleting data throughout the data set will affect the mean, median, mode, and distribution of the data set.

Indicator	Does Not Meet Expectations	Approaches Expectations	Meets Expectations	Exceeds Expectations
8.DPSR.1.4: For two data sets (numerical or graphical), compare and interpret the centers, spreads, and overlap of data to draw inferences about data in mathematical and real-world situations. Limit displays to double line graphs, back-to-back stem-and-leaf plots, and double box plots.	For a data set (numerical or graphical), recognize the centers and spreads to identify inferences about data in mathematical and real-world situations. Limit displays to double line graphs, back-to-back stem-and-leaf plots, and double box plots.	For two data sets (numerical or graphical), identify the centers, spreads, and overlap of data to identify inferences about data in mathematical and real-world situations. Limit displays to double line graphs, back-to-back stem-and-leaf plots, and double box plots.	For two data sets (numerical or graphical), compare and interpret the centers, spreads, and overlap of data to draw inferences about data in mathematical and real-world situations. Limit displays to double line graphs, back-to-back stem-and-leaf plots, and double box plots.	For two data sets (numerical or graphical), use a comparison or interpretation to defend conclusions about the data set in mathematical and real-world situations. Limit displays to double line graphs, back-to-back stem-and-leaf plots, and double box plots.

8.DPSR.2

Calculate and interpret probability.

Indicator	Does Not Meet Expectations	Approaches Expectations	Meets Expectations	Exceeds Expectations
8.DPSR.2.1: Determine the sample space for a compound event.	Identify one possible outcome for a compound event.	Create a tree diagram or similar representation for a compound event.	Determine the sample space for a compound event.	Explain how replacement, independence, and mutually exclusive events affect the size of and method of finding the sample space.
8.DPSR.2.2: Calculate and interpret the probability of compound independent and dependent events.	Recognize a compound event as being independent or dependent.	Calculate the probability of compound independent events.	Calculate and interpret the probability of compound independent and dependent events.	Explain how to make a dependent event independent and vice versa, then compare the probability of the two events.

Measurement, Geometry, and Spatial Reasoning (MGSR)

8.MGSR.1

Determine the measurements of geometric figures.

Indicator	Does Not Meet Expectations	Approaches Expectations	Meets Expectations	Exceeds Expectations
8.MGSR.1.1: Given the geometric formulas, find the volume of cones, cylinders, and spheres in mathematical and real-world situations.	Identify whether a mathematical or real-world situation is represented by a cone, cylinder or sphere.	Given the geometric formulas and a labeled figure, find the volume of cones, cylinders, and spheres in mathematical problems.	Given the geometric formulas, find the volume of cones, cylinders, and spheres in mathematical and real-world situations.	Explain the relationship of the volume formulas for cones, cylinders, and spheres.
8.MGSR.1.2: Find the distance between any two points in the coordinate plane using the *Pythagorean Theorem.*	Recognize the *Pythagorean Theorem* can be used to find the distance between any two points on a coordinate plane.	Identify the vertical and horizontal values needed to find the distance between any two points in the coordinate plane using the *Pythagorean Theorem*.	Find the distance between any two points in the coordinate plane using the *Pythagorean Theorem*.	Explain the error in using the *Pythagorean Theorem* to find the distance between any two points in the coordinate plane.
8.MGSR.1.3: Given the *Pythagorean Theorem*, determine unknown side lengths in right triangles in mathematical and real-world situations.	Recognize the *Pythagorean Theorem* can be used to find a missing side length in a right triangle.	Given the *Pythagorean Theorem*, identify the unknown side length in a right triangle in mathematical problems.	Given the *Pythagorean Theorem*, determine unknown side lengths in right triangles in mathematical and real-world situations.	Use the length found using the *Pythagorean Theorem* to explain mathematical and real-world situations.
8.MGSR.1.4: Determine if a given set of sides forms a right triangle.	Recognize the *Pythagorean Theorem* can be used to determine if a given set of sides forms a right triangle.	Identify a set of side lengths that form a right triangle.	Determine if a given set of sides forms a right triangle.	Explain how to create other sets of sides that also form right triangles.

8.MGSR.2

Determine angle and/or side relationships.

Indicator	Does Not Meet Expectations	Approaches Expectations	Meets Expectations	Exceeds Expectations
8.MGSR.2.1: Determine missing angle measurements created when parallel lines are cut by a transversal.	Recognize the types of relationships of angles created when parallel lines are cut by a transversal.	Identify the angle relationships created when parallel lines are cut by a transversal.	Determine missing angle measurements created when parallel lines are cut by a transversal.	Solve problems involving algebraic expressions for missing angle measurements created when parallel lines are cut by a transversal.
8.MGSR.2.2: Determine if two-dimensional figures are congruent or similar.	Recognize congruent and similar as terms to describe two-dimensional figures.	Identify two-dimensional congruent figures.	Determine if two-dimensional figures are congruent or similar.	Explain how the two-dimensional figures are classified as congruent or similar.
8.MGSR.2.3: Identify the congruent corresponding angles of similar polygons.	Recognize the appropriate symbols needed to show that two angles are congruent.	Recognize similar polygons have congruent corresponding angles.	Identify the congruent corresponding angles of similar polygons.	Draw the connections between congruence, similarity, rigid and non-rigid transformations and congruency of corresponding angles.
8.MGSR.2.4: Discover and apply the *Exterior Angle Theorem* of triangles to find a missing angle.	Recognize that an interior angle and its adjacent exterior angle are supplementary.	Identify the relationship between an exterior angle of a triangle and the two non-adjacent interior angles of the triangle.	Discover and apply the *Exterior Angle Theorem* of triangles to find a missing angle.	Justify the use of the *Exterior Angle Theorem* of triangles to find a missing angle.
8.MGSR.2.5: Apply proportional reasoning to find the missing side lengths of two similar figures.	Recognize that the side lengths of similar figures are proportional.	Identify the proportion needed to find the missing side lengths of two similar figures.	Apply proportional reasoning to find the missing side lengths of two similar figures.	Explain why all corresponding side lengths between two similar figures must have the same proportion.

8.MGSR.3

Graph on a coordinate plane.

Indicator	Does Not Meet Expectations	Approaches Expectations	Meets Expectations	Exceeds Expectations
8.MGSR.3.1: Identify the transformation as rotation, reflection, and/or translation. Limit rotations to multiples of 90 degrees centered on the origin.	Recognize that transformations include rotations, reflections and translations.	Recognize a rotation, reflection, and translation. Limit rotations to multiples of 90 degrees centered on the origin.	Identify the transformation as a rotation, reflection, and/or translation. Limit rotations to multiples of 90 degrees centered on the origin.	Explain the differences between rotation, reflection, and/or translation.
8.MGSR.3.2: Identify congruent angles and congruent line segments of a preimage and its image.	Recognize that a preimage and its image have congruent angles and congruent line segments when a rotation, reflection, and/or translation is applied.	Identify congruent angles and congruent line segments of a preimage and its image when a translation is applied.	Identify congruent angles and congruent line segments of a preimage and its image.	Explain how to identify congruent angles and congruent line segments of a preimage and its image.
8.MGSR.3.3: Translate geometric figures vertically and/or horizontally.	Recognize the direction of a translation of geometric figures.	Identify the translation of geometric figures vertically and/or horizontally.	Translate geometric figures vertically and/or horizontally.	Explain how to translate geometric figures vertically and/or horizontally.
8.MGSR.3.4: Reflect geometric figures with respect to the *x*-axis and/or *y*-axis.	Recognize which axis the geometric figure was reflected in respect to.	Identify the reflection of geometric figures with respect to the *x*-axis and/or *y*-axis.	Reflect geometric figures with respect to the *x*-axis and/or *y*-axis.	Explain how to reflect geometric figures with respect to the *x*-axis and/or *y*-axis.
8.MGSR.3.5: Rotate geometric figures 90, 180, and 270 degrees, both clockwise and counterclockwise, about the origin of a coordinate plane.	Recognize the degree and direction of rotation of geometric figures about the origin in a coordinate plane.	Identify the rotation of geometric figures about the origin in a coordinate plane. Rotation could be 90, 180, or 270 degrees, either clockwise or counterclockwise.	Rotate geometric figures 90, 180, and 270 degrees, both clockwise and counterclockwise, about the origin in a coordinate plane.	Explain how to rotate geometric figures 90, 180, and 270 degrees, both clockwise and counterclockwise, about the origin in a coordinate plane.
8.MGSR.3.6: Create a dilation using a given scale factor and describe the effect of a dilation.	Recognize a dilation as an enlargement or reduction given the scale factor or the graph of the preimage and image.	Identify a dilation using a given scale factor.	Create a dilation using a given scale factor and describe the effect of a dilation.	Explain how to create a dilation using a given scale factor.

Indicator	Does Not Meet Expectations	Approaches Expectations	Meets Expectations	Exceeds Expectations
8.MGSR.3.7: Describe the effect of a series of transformations, including *dilations*, *translations*, *rotations*, and *reflections*, on two-dimensional figures using coordinates on the coordinate plane.	Recognize the effect of a series of two transformations including *dilations*, *translations*, *rotations*, and *reflections* on two-dimensional figures using coordinates on the coordinate plane.	Identify the effect of a series of transformations, including *dilations*, *translations*, *rotations*, and *reflections*, on two-dimensional figures using coordinates on the coordinate plane.	Describe the effect of a series of transformations, including *dilations*, *translations*, *rotations*, and *reflections*, on two-dimensional figures using coordinates on the coordinate plane.	Compare the effects of a series of transformations, particularly when the transformations are in a different order, on two-dimensional figures using coordinates on the coordinate plane.

Numerical Reasoning (NR)

8.NR.1

Translate among multiple representations of rational numbers.

Indicator	Does Not Meet Expectations	Approaches Expectations	Meets Expectations	Exceeds Expectations
8.NR.1.1: Convert any form of a rational number to any other form including fractions (mixed numbers), decimals, and percentages.	Identify fractions that are equivalent to repeating decimals.	Identify equivalent forms of rational numbers including fractions (mixed numbers), and decimals.	Convert any form of a rational number to any other form including fractions (mixed numbers), decimals, and percentages.	Justify mathematical and real-world situations where a different expression of a rational number is more useful than the original form.

8.NR.2

Utilize real numbers in mathematical and real-world situations.

Indicator	Does Not Meet Expectations	Approaches Expectations	Meets Expectations	Exceeds Expectations
8.NR.2.1: Compare real numbers and write statements using *is equal to* (=), *is not equal to* (≠), *is less than* (<), *is greater than* (>), *is greater than or equal to* (≥), or *is less than or equal to* (≤).	Identify the smaller number between two real numbers.	Identify the statement that correctly compares two real numbers using *is equal to* (=), *is not equal to* (≠), *is less than* (<), *is greater than* (>), *is greater than or equal to* (≥), or *is less than or equal to* (≤).	Compare real numbers and write statements using *is equal to* (=), *is not equal to* (≠), *is less than* (<), *is greater than* (>), *is greater than or equal to* (≥), or *is less than or equal to* (≤).	Justify the comparison of two or more real numbers.
8.NR.2.2: Classify and order the subsets of real numbers in the number system including natural, whole, integer, rational, and irrational numbers.	Recognize there are subsets of real numbers in the number system including natural, whole, integer, rational, and irrational numbers.	Identify in which subset(s) of the real number system a value is classified including natural, whole, integer, rational, and irrational numbers.	Classify and order the subsets of real numbers in the number system including natural, whole, integer, rational, and irrational numbers.	Explain errors in classifying numbers in the number system including natural, whole, integer, rational, and irrational numbers.

Patterns, Algebra, and Functional Reasoning (PAFR)

8.PAFR.1

Determine if a table, graph, verbal description, or equation represents a function and describe its characteristics.

Indicator	Does Not Meet Expectations	Approaches Expectations	Meets Expectations	Exceeds Expectations
8.PAFR.1.1: Define an equation in slope-intercept form ($y = mx + b$) as being a linear function.	Recognize the similarities between proportional relationships and linear functions.	Identify an equation in slope-intercept form ($y = mx + b$) as being a linear function.	Define an equation in slope-intercept form ($y = mx + b$) as being a linear function.	Justify that an equation in slope-intercept form ($y = mx + b$) is a linear function.
8.PAFR.1.2: Identify and describe the constant rate of change and the *y*-intercept of a linear function.	Recognize the constant rate of change and the *y*-intercept of a linear function from an equation written in slope-intercept form.	Recognize the constant rate of change and the *y*-intercept of a linear function on a graph of the function.	Identify and describe the constant rate of change and the *y*-intercept of a linear function.	Use the rate of change and *y*-intercept of a linear function to graph at least two points on a coordinate plane.
8.PAFR.1.3: Determine if a graph, table, mapping, or verbal description is a function (linear or nonlinear) or not a function.	Recognize that a function has multiple representations.	Recognize a function as a structure with two sets and a rule.	Determine if a graph, table, mapping, or verbal description is a function (linear or nonlinear) or not a function.	Explain why a graph, table, mapping, or verbal description is a function (linear or nonlinear) or not a function.
8.PAFR.1.4: Describe the key features of given functions, including *domain, range, intervals of increasing or decreasing, constant, discrete, continuous*, and *intercepts*.	Identify the key features of given functions, including *domain, range*, and *intercepts*.	Identify the key features of given functions, including *domain, range, intervals of increasing or decreasing, constant, discrete, continuous*, and *intercepts*.	Describe the key features of given functions, including *domain, range, intervals of increasing or decreasing, constant, discrete, continuous*, and *intercepts*.	Use key features of graphs to make and justify conclusions in mathematical and real-world situations.
8.PAFR.1.5: Use multiple representations including mappings, tables, graphs, verbal description, and equations (only when linear) of two functions to compare the functions and draw conclusions.	Compare two functions when in the same representation.	Identify differences and similarities of two functions, including graphs, verbal descriptions, and equations (only when linear).	Use multiple representations including mappings, tables, graphs, verbal description, and equations (only when linear) of two functions to compare the functions and draw conclusions.	Use the comparison of multiple representations of two functions to make and justify conclusions in mathematical and real-world situations.

Indicator	Does Not Meet Expectations	Approaches Expectations	Meets Expectations	Exceeds Expectations
8.PAFR.1.6: Translate among the multiple representations, including mappings, tables, graphs, verbal description, and equations (only when linear) of a function.	Translate from one representation to one other representation.	Translate from a table to any other representation.	Translate among the multiple representations, including mappings, tables, graphs, verbal description, and equations (only when linear) of a function.	Explain how to translate among the multiple representations, including mappings, tables, graphs, verbal description, and equations (only when linear) of a function.

8.PAFR.2

Write, simplify, and evaluate algebraic expressions; write and solve algebraic equations and inequalities.

Indicator	Does Not Meet Expectations	Approaches Expectations	Meets Expectations	Exceeds Expectations
8.PAFR.2.1: Solve multi-step one-variable equations and inequalities with variables on both sides with rational coefficients.	Recognize that terms can be combined on each side to solve a multi-step one-variable equation or inequality with variables on both sides with rational coefficients.	Identify a solution to a multi-step one-variable equation or inequality with variables on both sides with rational coefficients.	Solve multi-step one-variable equations and inequalities with variables on both sides with rational coefficients.	Explain errors in solving multi-step one-variable equations and inequalities with variables on both sides with rational coefficients.
8.PAFR.2.2: Describe single-variable equations as having one solution, no solution, or an infinite number of solutions.	Recognize that a single-variable equation can have one solution, no solution, or an infinite number of solutions.	Identify when a single-variable equation has one solution.	Describe single-variable equations as having one solution, no solution, or an infinite number of solutions.	Use more than one representation of a function to explain why a single-variable equation has one solution, no solution, or an infinite number of solutions.
8.PAFR.2.3: Identify the rate of change for a linear function as the slope of the line.	Identify the rate of change for a linear function.	Compare the rate of change for a linear function and the slope of the line of the function.	Identify the rate of change for a linear function as the slope of the line.	Justify why the rate of change for a linear function is the slope of the line.
8.PAFR.2.4: Explain why the slope, *m*, is the same between any two distinct points on a linear graph.	Find the slope, *m*, between any two distinct points on a linear graph.	Compare the slope, *m*, between any two distinct points and two other distinct points on a linear graph.	Explain why the slope, *m*, is the same between any two distinct points on a linear graph.	Use the concept that the slope is the same between any two points to solve mathematical and real-world situations.
8.PAFR.2.5: Given a table or a graph, identify the slope and the *y*-intercept of a line and write a linear equation to express that line.	Identify the slope and the *y*-intercept in a linear equation.	Given a table or a graph, identify the slope or the *y*-intercept of a line.	Given a table or a graph, identify the slope and the *y*-intercept of a line and write a linear equation to express that line.	Given a table or a graph, explain the error in identifying the slope and the *y*-intercept of a line and writing a linear equation to express that line.

8.PAFR.3

Apply mathematical patterns, properties, and algorithms to the set of rational numbers to find sums, differences, products, and quotients and to write equivalent expressions.

Indicator	Does Not Meet Expectations	Approaches Expectations	Meets Expectations	Exceeds Expectations
8.PAFR.3.1: Analyze patterns of perfect squares and perfect cubes to evaluate square roots and cube roots. Limit to square roots less than or equal to 400 and cube roots less than or equal to 1,000.	Identify the next perfect square or perfect cube in a pattern. Limit to square roots less than or equal to 400 and cube roots less than or equal to 1,000.	Identify the square root or cube root of a number. Limit to square roots less than or equal to 400 and cube roots less than or equal to 1,000.	Analyze patterns of perfect squares and perfect cubes to evaluate square roots and cube roots. Limit to square roots less than or equal to 400 and cube roots less than or equal to 1,000.	Describe the relationship between a perfect square and evaluating square roots and the relationship between a perfect cube and evaluating cube roots. Limit to square roots less than or equal to 400 and cube roots less than or equal to 1,000.
8.PAFR.3.2: Approximate non-perfect square roots and cube roots to nearest tenth. Limit to square roots less than or equal to 400 and cube roots less than or equal to 1,000.	Recognize a non-perfect square root or a non-perfect cube root. Limit to square roots less than or equal to 400 and cube roots less than or equal to 1,000.	Identify the two integers the approximation of a non-perfect square root or cube root would be between. Limit to square roots less than or equal to 400 and cube roots less than or equal to 1,000.	Approximate non-perfect square roots and cube roots to nearest tenth. Limit to square roots less than or equal to 400 and cube roots less than or equal to 1,000.	Explain how to approximate non-perfect square roots and cube roots to the nearest tenth. Limit to square roots less than or equal to 400 and cube roots less than or equal to 1,000.
8.PAFR.3.3: Apply laws of exponents to simplify algebraic expressions involving no more than three variables and integer exponents.	Recognize the simplified algebraic expression after a law of exponents was applied, involving no more than one variable and integer exponents.	Apply laws of exponents to simplify algebraic expressions involving no more than two variables and integer exponents.	Apply laws of exponents to simplify algebraic expressions involving no more than three variables and integer exponents.	Justify how to apply the laws of exponents to simplify algebraic expressions involving no more than three variables and integer exponents.